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Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendments to Parts 1, 2, 27, and 90 of the	)	WT Docket No 02 - 8
Commission's Rules to License Services in the	)	RM-9267
216-220 MHz, 1390-1395 MHz, 1427-1429 MHz,	)	RM-9692
1429-1432 MHz, 1432-1435 MHz, 1670-1675	)	RM-9797
MHz, and 2385-2390 MHz Government Transfer	)	RM-9854
Bands	)	RM-9882

MEMORANDUM OPINION AND ORDER

Adopted: August 7, 2003 **Released: August 19, 2003**

By the Commission

I. INTRODUCTION AND EXECUTIVE SUMMARY

1 In this *Memorandum Opinion and Order*, we address three petitions for reconsideration[1] and two petitions for clarification[2] of the *Report and Order*, released on May 24, 2002, in this proceeding.[3] The *Report and Order* adopted service rules to govern the licensing of 27 MHz of electromagnetic spectrum in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1670-1675 MHz, and 2385-2390 MHz bands, which were reallocated for non-Government use.[4] In addition, on our own

[1] Aerospace and Flight Test Radio Coordinating Council, the American Society for Health Care Engineering of the American Hospital Association, and Celtronix Telemetry, Inc Petitions for Reconsideration.

[2] Final Analysis Communication Services, Inc , and Ornithological Council Petitions for Clarification

[3] Amendments to Parts 1, 2, 27 and 90 of the Commission's Rules to License Services in the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Report and Order*, WT Docket No 02-8, 17 FCC Rcd 9980, 9981-82 ¶ 1 (2002) (*Report and Order*)

[4] Two other petitions were filed on July 22, 2002, but will not be addressed at length in this *Memorandum Opinion and Order* Itron, Inc (Itron) filed a petition seeking reconsideration of the decision to license telemetry frequencies in the 1 4 GHz band on a shared, rather than exclusive basis *See id* at 10018 ¶ 94 On February 4, 2003, the Land Mobile Communications Council (LMCC) submitted to the Wireless Telecommunications Bureau a set of recommendations for assigning 1 4 GHz channels *See* Letter, dated Feb 4, 2003, from Larry A Miller, President, Land Mobile Communications Council, to John Muleta, Chief, Wireless Telecommunications Bureau, Federal Communications Commission (LMCC Letter) (*attached* LMCC Frequency Coordination Procedures, Rule 90.259 Telemetry Channels at 1427-1432 MHz) On March 17, 2003, Itron withdrew its petition because the concerns that prompted its filing of the petition were resolved during its consultations with the Wireless Telecommunications Bureau regarding the LMCC Letter *See* Letter, dated Mar 17, 2003, from Henry Goldberg, Goldberg, Godles, Wiener & Wright, to Marlene H Dortch, Secretary, Federal Communications Commission

In addition, XM Radio, Inc (XM) filed a petition seeking reconsideration of the out-of-band emission limits adopted for licensees in the 2385-2390 MHz band *See Report and Order*, 17 FCC Rcd at 10032 ¶¶ 129-130 On July 22, 2002, the National Telecommunications and Information Administration (NTIA) issued a report that explored the viability of making all or a portion of the 1710-1770 MHz and 2110-2170 MHz bands available for advanced mobile wireless (3G) systems *See* FCC Seeks Comment on the National Telecommunications and Information Administration's Report "An Assessment of the Viability of Accommodating Advanced Mobile

(continued)

motion, we correct certain rules that were adopted in the *Report and Order*, and adopt further rule amendments codifying decisions made by the Commission in the *Report and Order*.[5] We believe that our decision will promote the delivery of technologically innovative services to the public in a manner that provides sufficient interference protection to both existing and future operations entitled to such protection.

2. In this *Memorandum Opinion and Order*, we reach the following decisions:

- We decline to require that each 1392-1395 MHz band station register with the American Society of Health Care Engineering of the American Hospital Association (ASHE) upon initiating operations, as such a requirement would be contrary to the regulatory flexibility that is inherent with a geographic area license.

- We instruct ASHE and LMCC to present a joint coordination plan for the 1427-1432 MHz band, which is used by both Wireless Medical Telemetry Service (WMTS) and site-based non-medical telemetry, within one year of the release date of this *Memorandum Opinion and Order*.

- We decline to impose coordination procedures on the 1432-1435 MHz band licensees that operate within a hundred miles of 1435-1525 MHz flight test sites.

- We modify the channel plans that were adopted in the *Report and Order* for the 217-220 MHz and 1427-1432 MHz bands so that licensees can employ 25 kHz or 50 kHz bandwidths with center frequencies that require no more than three decimal places of accuracy (*e.g.*, 217.025 MHz), rather than five to six decimal places of accuracy (*e.g.*, 217.015625 MHz).

II. BACKGROUND

3. On January 2, 2002, the Commission released a *Reallocation Report and Order* in ET Docket 00-221.[6] Upon consideration of the record, it implemented a band plan to reallocate the subject spectrum bands for non-Government use consistent with the framework established in the Commission's November

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(continued from previous page)
Wireless (3G) Systems in the 1710-1770 MHz and 2110-2170 MHz Bands," ET Docket No. 00-258, *Public Notice*, 17 FCC Rcd 14390 (2002). The NTIA report explained that the 1710-1755 MHz band could be designated for 3G services if existing Federal Government systems operating in that band were relocated, and identified the 2385-2390 MHz band as a possible home for relocated 1710-1755 MHz Federal Government incumbents. The National Telecommunications and Information Administration (NTIA), An Assessment of the Viability of Accommodating Advanced Mobile Wireless (3G) Systems in the 1710-1770 MHz and 2110-2170 MHz Bands, at 2-3 (dated July 22, 2002). On July 7, 2003, in a *Notice of Proposed Rule Making*, we sought comment on our proposal to reallocate the 2385-2390 MHz band from exclusive non-Federal Government use to shared Federal Government/non-Federal Government use in order to facilitate relocation of 1710-1755 MHz Federal Government incumbents, thereby enabling the 1710-1755 MHz band to be used for Advanced Wireless Services. Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, *Fourth Notice of Proposed Rulemaking*, ET Docket No. 00-258, FCC 03-134 (rel. July 7, 2003). In view of this proposed reallocation, we will defer further action on the XM petition until the 2385-2390 MHz band reallocation issue is resolved.

[5] *See* Appendix B, *infra* (revisions to Sections 1.1307, 27.11, 90.175, 90.259, 95.630 of the Commission's Rules).

[6] Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Report and Order and Memorandum Opinion and Order*, ET Docket No. 00-221, 17 FCC Rcd 368 (2002) (*Reallocation Report and Order*).

1999 *Spectrum Policy Statement*[7] Generally, the Commission allocated the 216-220 MHz band to the fixed and mobile (except aeronautical telemetry) services on a co-primary basis and elevated the Low Power Radio Services from secondary to primary status in the 216-217 MHz band[8] In making this allocation, the Commission stated that the reallocation of the 216-220 MHz band does not disturb the status of the Automated Maritime Telecommunication Systems or 218-219 MHz Services[9] The Commission allocated the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz, and 1670-1675 MHz bands to the fixed and mobile (except aeronautical mobile) services on a primary basis[10] The 2385-2390 MHz band was allocated to the fixed and mobile services on a primary basis[11] The Commission shifted the allocation of WMTS from the 1429-1432 MHz band to the 1427-1429.5 MHz band and maintained the secondary status of non-medical telemetry systems in the band[12] Telemetry in the 1429.5-1432 MHz band was elevated to primary status[13] Finally, the Commission conditionally allocated the 1390-1392 MHz band for Non-Geosynchronous Satellite Orbit (NGSO) Mobile Satellite Service (MSS) feeder uplinks and the 1430-1432 MHz band for NGSO MSS feeder downlinks.[14]

4 In the *Report and Order* in this proceeding, the Commission adopted licensing and service rules for the subject spectrum bands, including technical specifications and coordination procedures to minimize the potential of harmful interference to co-channel or adjacent channel incumbent operations. The *Report and Order* was published in the Federal Register on June 20, 2002[15] On July 22, 2002, Final Analysis Communication Services, Inc (FACS) filed a petition for clarification. On that same date, Aerospace and Flight Test Radio Coordinating Council (AFTRCC), ASHE, and Celtronix Telemetry, Inc. (Celtronix) filed petitions for reconsideration On August 8, 2002, AFTRCC filed comments and a supplement to its petition for reconsideration. On November 5, 2002, the Ornithological Council requested clarification

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[7] *See* Amendment of the Commission's Rules Concerning Maritime Communications, *Second Memorandum Opinion and Order and Fifth Report and Order*, PR Docket 92-257, 17 FCC Rcd 6685 (2002), Principles for Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millennium, *Policy Statement*, 14 FCC Rcd 19868 (1999)

[8] *Reallocation Report and Order*, 17 FCC Rcd at 379-380 ¶¶ 25-26

[9] *Id* at 377-378 ¶ 21 (citing Amendment of the Commission's Rules Concerning Maritime Communications, *Fourth Report and Order and Third Notice of Proposed Rule Making*, PR Docket No 92-257, 15 FCC Rcd 22585 (2000) and Amendment of Part 95 of the Commission's Rules to Provide Regulatory Flexibility in the 218-219 MHz Service, *Report and Order and Memorandum Opinion and Order*, WT Docket No 98-169, 15 FCC Rcd 1497 (1999))

[10] *Reallocation Report and Order*, 17 FCC Rcd at 391-397 ¶¶ 49-68 We note that aeronautical mobile is authorized to operate throughout the 216-220 MHz band on a secondary basis *See* 47 C.F R § 2.106

[11] *Reallocation Report and Order*, 17 FCC Rcd at 397 ¶¶ 67-71

[12] *Id* at 391-394 ¶¶ 48-60 The Commission adopted a band-flip for the 1427-1429.5 MHz and 1429.5-1432 MHz bands Specifically, the Commission established that WMTS would be primary in seven geographic carve out areas from the 1429-1431 5 MHz portion of the band segments, and non-medical telemetry would be primary in the 1427-1429 MHz and 1431 5-1432 MHz portion of the band segments *Report and Order* at 9993-94 ¶¶ 25-26

[13] *Reallocation Report and Order* at 391-394 ¶¶ 48-60 We note that the 1390-1392 MHz band is currently allocated to fixed and mobile (except aeronautical) service *See* 47 C F.R § 2 106

[14] *Id* at 394 ¶ 59 The NGSO MSS Feeder allocation is conditioned on the adoption of a similar international allocation The international allocation subsequently was adopted on a secondary basis. *See* ¶ 7, *infra*

[15] 67 Fed Reg 41847 (2002)

III. DISCUSSION

A. Petitions for Reconsideration

5 *The 216-220 MHz Band* In the *Report and Order*, the Commission adopted a requirement that the transmit output power of secondary telemetry in the 217-220 MHz band be limited to two watts [16] Previously, our rules contained no maximum power for secondary telemetry operations in this band. authorized power was specified on the authorization on a case-by-case basis [17] The Commission adopted a power limit because it believed that such a restriction was necessary to minimize the possibility of harmful interference to primary users in the 217-220 MHz band [18] Celtronix, an incumbent secondary telemetry operator, requests rescission of the new power limit requirement, at least to the extent that the limitation applies to incumbents whose licenses authorize a higher power level [19] We grant Celtronix's petition to the extent that we now clarify that the newly adopted requirement to limit the transmit output power of secondary telemetry in the 217-220 MHz band to two watts does not apply to incumbent stations Instead, incumbent stations will be grandfathered under their existing parameters Should an incumbent choose to add stations to its system or modify its existing stations, the new or modified stations will be required to comply with the two-watt power limit

6 Additionally, the Ornithological Council, which represents ten scientific societies of biologists who engage in the scientific study of birds as a branch of zoology, requested clarification[20] of the relation between Section 90 248(f) of the Commission's Rules, which permits 216-220 MHz airborne wildlife applications if the transmitter does not exceed one milliwatt of power,[21] and Section 90.259(c)(3) of the Commission's Rules (as renumbered in the *Report and Order*), which states that airborne telemetry[22] use of this band is prohibited [23] We will revise Section 90.259(c)(3) to clarify that the general prohibition on airborne use for general telemetry in Section 90 259(c)(3) does not preclude the airborne wildlife applications permitted by Section 90.248(f)

7 *The 1390-1392 MHz and 1430-1432 MHz Bands* As noted above, the allocation in the *Reallocation Report and Order* of the 1390-1392 MHz and 1430-1432 MHz bands to NGSO MSS feeder uplinks and downlinks on a primary basis is contingent upon the adoption of an international allocation at the 2003 International Telecommunication Union World Radiocommunication Conference.[24] In the *Notice of Proposed Rule Making* in this proceeding, the Commission concluded that the public interest would be best served by addressing terrestrial and satellite sharing in these bands in a separate proceeding once the ongoing sharing studies are completed and the international allocation of this spectrum is

[16] *Report and Order*, 17 FCC Rcd at 10034-35 ¶ 139

[17] *Id* at 10034 ¶ 137

[18] *Id* at 10034-35 ¶ 139

[19] Celtronix Petition at 3-4

[20] Ornithological Council Comments at 1

[21] 47 C F R § 90 248(f)

[22] Airborne telemetry transmissions are used to track the movement of birds that are fitted with transmitters

[23] 47 C F R § 90.259(c)(3)

[24] *See Reallocation Report and Order*, 17 FCC Rcd at 391 ¶ 48

secured [25] FACS, a non-voice NGSO MSS licensee, seeks clarification that, if and when the contingency is met, we may need to modify the service rules adopted in this proceeding for the 1390-1392 MHz and 1430-1432 MHz bands, and place secondary status conditions on the licenses granted to terrestrial operators pursuant to those service rules in order to ensure that satellite operations will not suffer harmful interference [26] Subsequently, however, WRC-03 adopted a *secondary* allocation for NGSO MSS feeder uplinks and downlinks in the 1390-1392 MHz and 1430-1432 MHz bands The international allocation is contingent on the completion of compatibility studies, which will be reported at the next World Radiocommunication Conference, in 2007 We grant the FACS request to the limited extent that we reiterate that we intend to address terrestrial and satellite sharing rules and procedures in these bands in a separate proceeding at the appropriate time [27] We will not, however, at this time, further address terrestrial and satellite sharing requirements for the 1390-1392 MHz and 1430-1432 MHz bands.

8. *The 1392-1395 MHz and 1427-1432 MHz Bands* In the *Report and Order*, the Commission concluded that the paired 1392-1395 MHz and 1432-1435 MHz bands will be licensed for flexible use in six geographic areas [28] These bands will be authorized to provide a variety or combination of fixed, mobile, common carrier, and non-common carrier services [29] It determined that in order to protect adjacent band WMTS operations, 1392-1395 MHz facilities would be limited to a measured or predicted field strength of 150 uV/m that may be radiated at the site of any WMTS operation in the 1395-1400 MHz band [30] The Commission did not believe, however, that protection of WMTS also necessitated adoption of adjacent band frequency coordination procedures. Regarding the 1427-1429.5 MHz and 1429 5-1432 MHz bands, which are used by WMTS and site-based non-medical telemetry,[31] it limited non-medical telemetry licensees to a measured or predicted field strength of no more than 150 uV/m into the WMTS portions of the band [32] In addition, the Commission provided that each Part 90 frequency coordinator must, within one business day of making a frequency recommendation for non-medical telemetry operations in the 1427-1432 MHz band, notify and provide technical information regarding the proposed telemetry operations to ASHE, the WMTS frequency coordinator.[33] The Commission also concluded that upon the initial deployment of WMTS equipment in the 1427-1432 MHz band, ASHE must notify all non-medical telemetry licensees potentially affected by such deployment (*i.e*, those telemetry licensees that may have to modify their operations in order to avoid causing harmful interference to WMTS facilities) [34]

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[25] Reallocation of the 216-220 MHz, 1390-1395 MHz, 1427-1429 MHz, 1429-1432 MHz, 1432-1435 MHz, 1670-1675 MHz, and 2385-2390 MHz Government Transfer Bands, *Notice of Proposed Rule Making*, WT Docket No 02-8, 17 FCC Rcd 2500, 2531 ¶ 77 (2002)

[26] FACS Petition at 1-2

[27] *See Reallocation Report and Order*, 17 FCC Rcd at 392 ¶ 53

[28] *Report and Order*, 17 FCC Rcd at 9990-91 ¶¶ 16-17 The spectrum will be licensed as two paired 1 5 MHz channels *Id* at 9993 ¶ 23

[29] *Id* at 10006 ¶ 62

[30] *Id* at 10054-55 ¶ 204

[31] The Commission adopted a band-flip in certain portions of the country for the 1427-1429.5 MHz and 1429.5-1432 MHz bands Specifically, the Commission established that WMTS would be primary in seven geographic carve out areas from the 1429-1431 5 MHz portion of the band segments, and non-medical telemetry would be primary in the 1427-1429 MHz and 1431 5-1432 MHz portion of the band segments *Id* at 9993-94 ¶¶ 25-26

[32] *Id* at 10054-55 ¶ 204

[33] *Id* at 10018 ¶ 95

[34] *Id* at 10018-19 ¶ 96

9 ASHE seeks reconsideration of the Commission's decision to not impose adjacent band frequency coordination procedures on 1392-1395 MHz licensees ASHE argues that 1392-1395 MHz licensees should be required to register their stations with ASHE upon initiating operations [35] ASHE argues that, absent such a requirement, it will have difficulty identifying the 1392-1395 MHz band stations that may cause interference to adjacent channel WMTS operations and expediting the resolution of such interference [36] Based on the record currently before us, we are not persuaded by ASHE's argument Given the limited number of 1392-1395 MHz licensees nationwide, and the availability of licensing information for these 1392-1395 MHz band licensees on the Commission's Universal Licensing System (ULS), we do not believe that it will be difficult for adjacent channel WMTS licensees to identify potential sources of interference Furthermore, we are concerned that requiring the registration of each 1392-1395 MHz band station, as ASHE proposes, would impair the regulatory flexibility that the Commission intended to grant with a geographic area license

10 Regarding the 1427-1432 MHz band, ASHE argues that insufficient interference protection to WMTS operations is provided by the requirement that each Part 90 frequency coordinator notify and provide technical information regarding the proposed telemetry operations to ASHE within one business day of making a frequency recommendation for non-medical telemetry operations.[37] ASHE argues that WMTS incumbents will have a greater assurance of interference protection if Part 90 frequency coordinators are also required to contact ASHE and examine its WMTS database prior to making their recommendations.[38] We are not persuaded that we should impose any further obligations upon the Part 90 frequency coordinators at this time [39] We nonetheless reiterate our continuing expectation that the Part 90 frequency coordinators, which are certified by the Commission and can be de-certified for poor performance,[40] will make use of all relevant information, such as ASHE's WMTS database, before making a frequency recommendation in the 1427-1432 MHz band We, of course, have the discretion to revisit this issue in the future, if we find that the coordination procedures are not providing sufficient interference protection to WMTS operations

11 ASHE also argues that it lacks the expertise and resources to comply with the requirement that it identify and then notify all non-medical telemetry licensees that are potentially affected by the deployment of WMTS equipment at a given facility [41] As an alternative, ASHE recommends that upon initial deployment of WMTS equipment, it should be required to notify only the Part 90 frequency coordinators who, ASHE suggests, are better equipped to identify and notify all potentially affected telemetry licensees [42] In light of ASHE's concerns regarding our recommended coordination procedures and in furtherance of our continuing efforts to ensure protection of WMTS operations from harmful interference, we believe that it would be in the public interest to provide ASHE and LMCC with the opportunity to formulate a mutually agreeable coordination plan Therefore, within one year of the

[35] ASHE Petition at 6

[36] *Id*

[37] ASHE Comments at 5

[38] *Id*

[39] Pursuant to 47 C F.R § 90 175, frequency coordinators may request, and all applicants are required to provide, all appropriate technical information, system requirements, and justification for requested station parameters when such information is necessary to identify and recommend the most appropriate frequency

[40] *See* Frequency Coordination in the Private Land Mobile Radio Services, *Report and Order*, PR Docket No 83-737, 103 FCC 2d 1093 (1986)

[41] ASHE Comments at 6-7

[42] *Id* at 7-8

release date of this *Memorandum Opinion and Order*, we request that ASHE and LMCC file a joint coordination plan

12 *The 1432-1435 MHz Band* In its comments to the *Notice of Proposed Rule Making* in this proceeding, AFTRCC, an association of aerospace companies engaged in the design, development, manufacture, and testing of commercial and military aircraft, space vehicles, missiles, and weapons systems, argued that the Commission should adopt frequency coordination procedures for licensees in the 1432-1435 MHz and 2385-2390 MHz bands in order to limit interference to flight test operations in the 1435-1525 MHz and 2360-2385 MHz bands [43] While recognizing the importance of aeronautical flight test telemetry, the Commission concluded in the *Report and Order* that imposing AFTRCC's proposed coordination requirements would not be in the public interest, because such requirements would be onerous and could jeopardize the viability of operations in the 1432-1435 MHz and 2385-2390 MHz bands [44] The Commission also concluded that aeronautical flight test operations would be afforded sufficient protection from adjacent band interference by limiting out-of-band emissions [45]

13 In its petition for reconsideration of the *Report and Order*, AFTRCC again requests that we adopt adjacent band coordination procedures for licensees in the 1432-1435 MHz band.[46] AFTRCC argues that there will be inadequate protection if licensees of the 1432-1435 MHz band are required to provide adjacent band interference protection only to the extent that such radiation exceeds the limits on out-of-band emissions [47] Because it contends that permitted out-of-band emissions can travel great distances,[48] it recommends that coordination procedures be imposed on the 1432-1435 MHz licensees that operate within a hundred miles of each flight test site [49] Noting that the Commission routinely imposes such coordination procedures on other wireless services without any suggestion that such procedures will be unusually burdensome, AFTRCC argues that the Commission's decision to reach a contrary conclusion in this instance is untenable [50]

14 We do not share AFTRCC's concern that permitted out-of-band emissions from the 1432-1435 MHz band will jeopardize the integrity of flight test telemetry operations We believe that 1432-1435 MHz signal attenuation, caused by distance and terrain, reduces the risk of adjacent band interference Moreover, because there are a limited number of cites where flight test operations currently

[43] *Report and Order* at 10044 ¶ 171

[44] *Id* at 10045 ¶ 175 The 1432-1435 MHz and 2385-2390 MHz bands will be authorized to provide a variety or combination of fixed, mobile, common carrier, and non-common carrier services *Id* at 10006 ¶ 62

[45] *Id* at 10045 ¶ 175

[46] AFTRCC Petition at 5 In addition, AFTRCC seeks reconsideration of the frequency coordination requirements adopted for licensees in the 2385-2390 MHz band *Id* In light of our proposed reallocation of this band, we will defer consideration of this aspect of AFTRCC's reconsideration petition *See* n 4, *supra*

[47] AFTRCC Petition at 5

[48] *Id* In its engineering statement, AFTRCC offers a worst-case scenario where a 27 dB increase in out-of-band emissions when using a high gain antenna with a low power transmitter raises the protection radius to more than 2000 km *See* Technical Analysis of the Need for an Adjacent Band Coordination Requirement for Commercial Operations in the Bands 1432-1435 MHz and 2385-2390 MHz, at 4 (dated July 21, 2002). AFTRCC acknowledges that the engineering statement relies on an International Telecommunications Union (ITU) recommendation that relates to in-band interference to flight test telemetry operations from geostationary satellites, rather than adjacent band interference from terrestrial operations *Id* at 1 We are not persuaded that this analysis is relevant to the issue before us

[49] AFTRCC Petition at 5-6

[50] *Id* at 7-8

exist[51] and may arise, we believe that such operations can be protected on a case-by-case basis through the use of certain mitigation techniques, such as boresight-to-boresight avoidance.[52] In view of the foregoing, we conclude that coordination procedures in this instance are unnecessary, and whatever perceived benefits they may provide would not be commensurate with the burden that they would impose on the 1432-1435 MHz band licensees. Therefore, as in the *Report and Order*,[53] we decline to adopt AFTRCC's recommendation. We nonetheless encourage 1432-1435 MHz band licensees to utilize mitigation techniques, to the extent practicable, in those areas where flight test operations exist.[54]

B. Channel Plans for 217-220 MHz and 1427-1432 MHz Telemetry Operations

15. In the *Report and Order*, the Commission adopted channel plans for telemetry operations in the 217-220 MHz and 1427-1432 MHz bands.[55] For the 217-220 MHz band, the Commission adopted a 6.25 kHz channel spacing requirement for narrowband operations, starting at 217.00625 MHz.[56] For the 1427-1432 MHz band, the Commission adopted a 12.5 kHz channel spacing requirement for narrowband operations, starting at 1427.0125 MHz.[57] Licensees in both bands are permitted to combine contiguous narrowband channels for operation up to 50 kHz, or more than 50 kHz upon a showing of adequate justification.[58]

16. As Commission staff began to modify ULS to implement these channel plans, and licensees prepared to conform to the new rules, it became clear that the channel plans adopted in the *Report and Order* could create difficulty for licensees who employ wider band operations. The *Report and Order* allows licensees to "construct" 25 kHz or 50 kHz channels by combining underlying contiguous narrowband channels. Building wider bandwidth channels from the narrowband channels established in the *Report and Order*, however, will result in 25 kHz and 50 kHz channels with center frequencies that require five to six decimal places of accuracy.[59] We are concerned that requiring such accuracy may greatly increase the cost of transmitting equipment for these bands. For instance, Data Flow, a manufacturer of equipment in the 217-220 MHz band, states that their existing 25 kHz equipment is

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[51] A search of the ULS database indicates that there are only four flight test telemetry licensees operating within 5 MHz of the edge of the 1435 MHz band. Of those, the band edge of only one operation is within 1 MHz of 1435 MHz.

[52] Boresight-to-boresight interference occurs when the main beams of the opposing antennas are pointed at each other. *See* Recommendation ITU-R M.1459, Protection Criteria for Telemetry Systems in the Aeronautical Mobile Service and Mitigation Techniques to Facilitate Sharing with Geostationary Broadcasting-Satellite and Mobile-Satellite Services in the Frequency Bands 1452-1525 MHz and 2310-2360 MHz, Annex 2 at 13.

[53] *Report and Order*, 17 FCC Rcd at 10045 ¶ 175.

[54] We note that flight test telemetry licensees can use ULS to identify potential sources of interference.

[55] *Report and Order* at 10034 ¶ 138, 10036 ¶ 142.

[56] *Id.* at 10034 ¶ 138, 10090.

[57] *Id.* at 10036 ¶ 142, 10091.

[58] *Id.* at 10034 ¶ 138, 10036 ¶ 142.

[59] For instance, a 25 kHz channel in the 217-220 MHz band can be "constructed" by combining four contiguous 6.25 kHz channels (*i.e.*, frequencies 217.00625 MHz through 217.02500 MHz). Combining these four channels will result in a 25 kHz channel with a center frequency of 217.015625 MHz. Thus, any 25 kHz bandwidth equipment operating on this channel would be required to transmit with a center frequency requiring six decimal places of accuracy. The same problem exists for the 1427-1432 MHz band. For example, combining four contiguous 12.5 kHz channels – 1427.0152 MHz through 1427.5000 MHz – would result in a 50 kHz channel centered on 1427.03125 MHz. Thus, any 50 kHz bandwidth equipment operating on this channel would be required to transmit with a center frequency requiring five decimal places of accuracy.

capable of transmitting only on frequencies that require – at most – three decimal places of accuracy (*i e* , 217 025 MHz) [60] Data Flow indicates that modifying the circuitry in its equipment to meet six decimal places of accuracy would be extremely costly [61] Data Flow also notes that virtually every licensee operating in the 217-220 MHz band currently transmits on frequencies which require only three decimal places of accuracy (*i e* , 217 025 MHz, 217.050 MHz, 217 075 MHz, etc.) [62]

17 In view of the foregoing, we will amend the channel plans for the 217-220 MHz and 1427-1432 MHz bands so as to allow licensees who employ wider band operations to continue operating on channels with center frequencies that require fewer then five decimal places of accuracy For the 217-220 MHz band, we retain the existing channel plan for 6 25 kHz channels, but overlay new channel plans, with new center frequencies, for 12 5 kHz, 25 kHz, and 50 kHz channels The amended 217-220 MHz band channel plan will ensure that both 25 kHz and 50 kHz channels will require only three decimal places of accuracy (*i e* , 217.025 MHz, 217.075 MHz, 217 125 MHz, etc) [63] As for the 1427-1432 MHz band, we will shift the channel plan adopted in the *Report and Order* downward by 6.25 kHz. As the LMCC notes, such a shift will accommodate incumbents who employ 50 kHz bandwidth equipment.[64] After the shift, 50 kHz channels will require only three decimal places of accuracy (*i e* , 1427.025 MHz, 1427.075 MHz, 1427.125 MHz, etc) Although the 25 kHz channels will require four decimal places of accuracy after the shift (*i e* 1427 0125 MHz, 1427 0375 MHz, 1427 0625 MHz, etc), we believe that this is less of a problem for the 1427-1432 MHz band than the 217-220 MHz band because there are fewer incumbents in the 1427-1432 MHz band who employ bandwidths that are less than 50 kHz Moreover, we believe that 1427-1432 MHz band equipment can be designed to operate with more accurate center frequencies, if, in the future, there is an increase in the number of 1427-1432 MHz licensees who seek to employ bandwidths that are less than 50 kHz.[65]

IV. PROCEDURAL MATTERS

A. Supplemental Final Regulatory Flexibility Analysis

18 A Supplemental Final Regulatory Flexibility Analysis has been prepared for this *Memorandum Opinion and Order* and is included in Appendix A

B. Ordering Clauses

19 ACCORDINGLY, IT IS ORDERED that Parts 1 27, 90, and 95 of the Commission's Rules ARE AMENDED as specified in Appendix B, effective 60 days after publication in the Federal Register.

20 IT IS FURTHER ORDERED pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S C §§ 154(i), 303(r), 405, and Section 1 429 of the Commission's Rules, 47 C.F.R § 1 429, that the petition for reconsideration filed by Aerospace and

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[60] *See* Comments of Donald B Schultze, Senior Consultant to Data Flow Systems, Inc at 3, dated Mar 13, 2003

[61] *Id* at 4

[62] *Id* at 1-2

[63] We note that the 50 kHz channels will be distributed every 50 kHz and that 25 kHz channels will be distributed every 25 kHz beginning at 217 025 MHz The 12 5 kHz and 6 25 kHz channels will be distributed in a similar manner as the wider band channels

[64] *See* LMCC Letter at 1

[65] *See* 47 C F R § 90 613 (800 MHz band licensees must design their 25 kHz bandwidth equipment to operate at four decimal places of accuracy)

Flight Test Radio Coordinating Council on July 22, 2002 IS DENIED IN PART to the extent set forth above

21 IT IS FURTHER ORDERED pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U S C §§ 154(i), 303(r), 405, and Section 1 429 of the Commission's Rules, 47 C F R § 1 429 that the petition for reconsideration filed by the American Society for Health Care Engineering of the American Hospital Association on July 22, 2002 IS DENIED

22 IT IS FURTHER ORDERED pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U S.C §§ 154(i), 303(r), 405, and Section 1 429 of the Commission's Rules, 47 C.F.R. § 1.429. that the petition for reconsideration filed by Celtronix Telemetry, Inc. on July 22, 2002 IS GRANTED to the extent set forth above.

23 IT IS FURTHER ORDERED pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S C. §§ 154(i), 303(r), 405, that the petition for clarification filed by Final Analysis Communication Services, Inc on July 22, 2002 IS PARTIALLY GRANTED and PARTIALLY DENIED to the extent set forth above.

24 IT IS FURTHER ORDERED pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S C §§ 154(i), 303(r), 405, and Section 1.429 of the Commission's Rules, 47 C.F.R. § 1 429, that the petition for reconsideration filed by Itron, Inc on July 22, 2002 IS DISMISSED

25 IT IS FURTHER ORDERED pursuant to Sections 4(i), 303(r), and 405 of the Communications Act of 1934, as amended, 47 U.S C §§ 154(i), 303(r), 405, that the petition for clarification filed by the Ornithological Council on November 5, 2002 IS GRANTED.

C. Further Information

26 For further information concerning the *Memorandum Opinion and Order*, contact Keith Fickner regarding legal matters, and Brian Marenco or Tim Maguire regarding engineering matters via phone at (202) 418-0680, TTY (202) 418-7233, or via e-mail at kfickner@fcc.gov, bmarenco@fcc.gov, or tmaguire@fcc.gov, respectively, Wireless Telecommunications Bureau, Federal Communications Commission, Washington, D.C 20554

27 Alternative formats (computer diskette, large print, audio cassette, and Braille) are available to persons with disabilities by contacting Brian Millen at (202) 418-7426, TTY (202) 418-7365, or via e-mail to bmillen@fcc gov This *Memorandum Opinion and Order* can be downloaded at http://www fcc gov/Wireless/Orders/2003/fcc03204 txt

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

Appendix A – Supplemental Final Regulatory Flexibility Analysis

1 As required by the Regulatory Flexibility Act (RFA),[66] a Final Regulatory Flexibility Analysis (FRFA) was incorporated in the *Report and Order*.[67] In view of the fact that we have adopted further rule amendments in this *Memorandum Opinion and Order*, we have included this Supplemental Final Regulatory Flexibility Analysis (SFRFA). This present SFRFA conforms to the RFA.[68]

Need for, and Objectives of the *Memorandum Opinion and Order*:

2 In this *Memorandum Opinion and Order*, on our own motion, we correct certain rules that were adopted in the *Report and Order*, and adopt further rule amendments that the Commission inadvertently failed to adopt in the *Report and Order*. In the *Report and Order*, the Commission adopted rules for the licensing and operation of fixed and mobile services in the 216-220 MHz, 1390-1395 MHz, 1427-1429.5 MHz, 1429.5-1432 MHz, 1432-1435 MHz, 1670-1675 MHz and 2385-2390 MHz bands pursuant to the provisions of the Communications Act of 1934, as amended, the Omnibus Budget Reconciliation Act of 1993 (OBRA-93), and the Balanced Budget Act of 1997 (BBA-97). The transfer of these bands to non-Government use should enable the development of new technologies and services, provide additional spectrum relief for congested private land mobile frequencies, and fulfill our obligations as mandated by Congress to assign this spectrum for non-Government use.

3 The *Report and Order* established competitive bidding rules and small business definitions for the unpaired 1390-1392 MHz, 1670-1675 MHz, and 2385-2390 MHz bands, and the paired 1392-1395 MHz and 1432-1435 MHz bands similar to those applied to the WCS 2.3 GHz band and the 700 MHz Guard Bands.[69] Consistent with the Commission's responsibility under Section 309(j) to promote opportunities for, and disseminate licenses to, a wide variety of applicants,[70] the *Report and Order* adopted small business size standards and bidding preferences for qualifying bidders that will provide such bidders with opportunities to compete successfully against large, well-financed entities. Specifically, with respect to the aforementioned bands, we define a "small business" as any entity with average annual gross revenues for the three preceding years not exceeding $40 million, and a "very small business" as any entity with average annual gross revenues for the three preceding years not exceeding $15 million.[71] Correspondingly, the Commission adopted a bidding credit of 15 percent for "small businesses" and a bidding credit of 25 percent for "very small businesses."[72] This bidding credit structure is consistent with the Commission's standard schedule of bidding credits, which may be found at Section 1.2110(f)(2) of the Commission's rules.[73]

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[66] *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. § 601 *et seq.*, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

[67] *Report and Order*, 17 FCC Rcd at 10060, Appendix C.

[68] *See* 5 U.S.C. § 604.

[69] *Report and Order*, 17 FCC Rcd at 10019-25 ¶¶ 97-108.

[70] 47 U.S.C. § 309(j)(3)(B), (4)(C)-(D).

[71] *See Report and Order*, 17 FCC Rcd at 10022-23 ¶ 106.

[72] *Id.*

[73] 47 C.F.R. § 1.2110(f)(2).

Summary of Significant Issues Raised by Public Comments in Response to the FRFA.

4 We received no comments in response to the FRFA in the *Report and Order* We continue to believe that the policies and rules adopted in this *Report and Order* will better enable small entities to compete for licenses in the unpaired 1390-1392 MHz, 1670-1675 MHz, and 2385-2390 MHz bands, and the paired 1392-1395 MHz and 1432-1435 MHz bands

Description and Estimate of the Number of Small Entities To Which the Rules Will Apply:

5 The RFA directs agencies to provide a description of, and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted [74] The RFA defines the term "small entity" as having the same meaning as the terms "small business," "small organization," and "small business concern" under section 3 of the Small Business Act.[75] A small business concern is one which. (1) is independently owned and operated, (2) is not dominant in its field of operation, and (3) satisfies any additional criteria established by the SBA [76] Nationwide, as of 1992, there were approximately 275,801 small organizations [77] "Small governmental jurisdiction" generally means "governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than 50,000."[78] As of 1992, there were approximately 85,006 such jurisdictions in the United States.[79] This number includes 38,978 counties, cities, and towns; of these, 37,566, or ninety-six percent, have populations of fewer than 50,000 [80] The Census Bureau estimates that this ratio is approximately accurate for all governmental entities Thus, of the 85,006 governmental entities, we estimate that 81,600 (ninety-one percent) are small entities

6 *Wireless Service Providers.* The SBA has developed a definition for small business within the two separate categories of Cellular and Other Wireless Telecommunications or Paging. Under that SBA definition , such a business is small if it has 1,500 or fewer employees.[81] According to the Commission's *Telephone Trends Report* data, 1,495 companies reported that they were engaged in the provision of wireless service.[82] Of these 1,495 companies, 989 reported that they have 1,500 or fewer employees and 506 reported that, alone or in combination with affiliates, they have more than 1,500 employees We do not have data specifying the number of these carriers that are not independently owned and operated, and thus are unable at this time to estimate with greater precision the number of wireless service providers that would qualify as small business concerns under the SBA's definition Consequently, we estimate that there are 989 or fewer small wireless service providers that may be affected by the rules adopted in this proceeding. Below, we further describe and estimate the number of small entity licensees and regulatees that may be affected by the rules adopted in this proceeding Except as noted, these services are associated with the above SBA small business size standard

[74] 5 U S C § 603(b)(3)

[75] *Id* § 601(3)

[76] *Id* § 632

[77] 1992 Economic Census, U S. Bureau of the Census, Table 6 (special tabulation of data under contract to the Office of Advocacy of the Small Business Administration)

[78] 5 U S C § 601(5)

[79] U S Dep't of Commerce, Bureau of the Census, *1992 Census of Governments*

[80] *Id*

[81] 13 C F R § 121.201, NAICS code 513322

[82] *Telephone Trends Report* (Aug 2001), Table 5 3

7 With respect to the 1390-1392 MHz band, the Commission will award a single 2 MHz license in each of fifty-two Major Economic Areas (MEAs). For the 1670-1675 MHz, and 2385-2390 MHz bands, the Commission will award a single nationwide license in each band For the paired 1392-1395 MHz and 1432-1435 MHz bands, the Commission will award a pair of 1 5 MHz licenses in each of six Economic Area Groupings (EAGs) For the 1432-1435 MHz band, the Commission will award licenses on a site by-site basis The Commission does not yet know how many applicants or licensees in any of these bands will be small entities

8 Existing services in other bands include entities that might be affected by the rules, either as existing licensees or potential applicants or licensees Incumbent services in the 1427-1429 5 MHz and 1429 5-1432 MHz bands include wireless medical telemetry (WMTS) and general telemetry

9 *Telemetry.* Incumbent non-medical telemetry operators in the 1427-1429.5 MHz and 1429.5-1432 MHz bands include Itron, Inc , Pueblo Service Company of Colorado and E Prime, Inc., and large manufacturers such as Deere and Company, Caterpillar, and General Dynamics None of these licensees are likely to be small businesses Itron, Inc. is the primary user of the 1427-1429 5 MHz and 1429.5-1432 MHz bands. Itron, Inc , with an investment of $100 million in equipment development, is not likely to be a small business One licensee, Zytex, a manufacturer of high-speed telemetry systems, may be a small business The Commission does not yet know how many applicants or licensees in these bands will be small entities.

10 *WMTS* Users of medical telemetry are hospitals and medical care facilities, some of which are likely to be small businesses The broad category of Hospitals consists of the following categories and the following small business providers with annual receipts of $29 million or less. General Medical and Surgical Hospitals, Psychiatric and Substance Abuse Hospitals, and Specialty Hospitals [83] For all these health care providers, census data indicate that there is a combined total of 330 firms that operated in 1997, of which 237 or fewer had revenues of less than $25 million [84] An additional 45 firms had annual receipts of $25 million to $49 99 million [85] We therefore estimate that most Hospitals are small, given SBA's size categories

11 The broad category of Nursing and Residential Care Facilities consists of the following categories and the following small business size standards [86] The category of Nursing and Residential Care Facilities with annual receipts of $6 million or less consists of Residential Mental Health and Substance Abuse Facilities, Homes for the Elderly, and Other Residential Care Facilities. The category of Nursing and Residential Care Facilities with annual receipts of $8.5 million or less consists of Residential Mental Retardation Facilities. The category of Nursing and Residential Care Facilities with annual receipts of less than $11 5 million consists of Nursing Care Facilities and Continuing Care Retirement Communities For all of these health care providers, census data indicate that there is a combined total of 18,011 firms that operated in 1997 [87] Of these, 16,165 or fewer firms had annual receipts of below $5 million [88] In addition, 1,205 firms had annual receipts of $5 million to $9 99 million, and 450 firms had

[83] 13 C F R § 121 201, NAICS Codes 622110, 622210, 622310

[84] *1997 Health Care Data*

[85] *Id*

[86] 13 C F R § 121 201, NAICS Codes 623110, 623210, 623220, 623311, 623312, 623990

[87] *1997 Health Care Data*

[88] *Id*

receipts of $10 million to $24.99 million [89] We therefore estimate that a great majority of Nursing and Residential Care Facilities are small, given SBA's size categories

Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements:

12 This *Memorandum Opinion and Order* imposes no new reporting, recordkeeping or other compliance requirements not previously adopted in this proceeding

Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered:

13. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.[90]

14. Regarding our affirmation in the *Memorandum Opinion and Order* of the Commission's decision in the *Report and Order* to require frequency coordination for primary and secondary telemetry operations in the 1427-1429.5 MHz and 1429.5-1432 MHz bands,[91] we do not anticipate any adverse impact on small entities. Although there are certain costs associated with filing an application through an FCC-certified frequency coordinator, on balance, the benefits of frequency coordination, especially the avoidance of harmful interference, outweigh any costs. An alternative to this approach would have been to not require frequency coordination, but this is unacceptable because of high congestion, primary incumbent operations that must be protected, and the fact that licensees in these bands must share frequencies. Our amendment to the channel plans for telemetry operations in the 217-220 MHz and 1427-1432 MHz bands will benefit small entities by requiring less precise, and thus, less expensive equipment.

Report to Congress:

15. The Commission will send a copy of this *Memorandum Opinion and Order*, including this SFRFA, in a report to be sent to Congress pursuant to the Congressional Review Act [92] In addition, the Commission will send a copy of this *Memorandum Opinion and Order*, including this SFRFA, to the Chief Counsel for Advocacy of the Small Business Administration. A copy of this *Memorandum Opinion and Order* and SFRFA (or summaries thereof) will also be published in the *Federal Register*. [93]

[89] *Id*

[90] *See* 5 U S C § 603(c)

[91] *Report and Order*, 17 FCC Rcd at 10018-19 ¶¶ 95-96

[92] 5 U S C § 801 (a)(1)(A)

[93] *See* 5 U S C § 604(b)

Appendix B – Final Rules

Part 1 of Title 47 of the Code of Federal Regulations, is revised to read as follows.

I. PART 1 – PRACTICE AND PROCEDURE

1 The authority citation for Part 1 continues to read as follows

AUTHORITY: 47 U.S.C. 151, 154(i), 154(j), 155, 225, 303(r), 309, and 325(e) unless otherwise noted.

2 Section 1.1307 is corrected to add the 698-746 MHz band to the Wireless Communications Service (Part 27) as follows.

§ 1.1307 Actions that may have a significant environmental effect, for which Environmental Assignments (EAs) must be prepared.

* * * * *

(b) * * *

TABLE 1 - TRANSMITTERS, FACILITIES AND OPERATIONS SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION

SERVICE (TITLE 47 CFR RULE PART)	EVALUATION REQUIRED IF:
*****	*****
Wireless Communications Service (Part 27)	(1) for the 1390-1392 MHz, 1392-1395 MHz, 1432-1435 MHz 1670-1675 MHz and 2385-2390 MHz bands: *Non-building-mounted antennas*: height above ground level to lowest point of antenna < 10 m *and* total power of all channels > 2000 W ERP (3280 W EIRP) *Building-mounted antennas*. total power of all channels > 2000 W ERP (3280 W EIRP) (2) for the 698-746 MHz, 746-764 MHz, 776-794 MHz, 2305-2320 MHz, and 2345-2360 MHz bands Total power of all channels > 1000 W ERP (1640 W EIRP)
*****	*****

Part 27 of title 47 of the Code of Federal Regulations is revised to read as follows.

PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

1. The authority citation for Part 27 continues to read as follows

AUTHORITY: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337, unless otherwise noted.

2 The cross references in Section 27 11 are corrected to read as follows.

§ 27.11 Initial authorization.

* * * * *

(e) *1390-1392 MHz band* Initial authorizations for the 1390-1392 MHz band shall be for 2 megahertz of spectrum in accordance with §27 5(d) Authorizations will be based on Major Economic Areas (MEAs), as specified in §27 6(d)

(f) *The paired 1392-1395 MHz and 1432-1435 MHz bands.* Initial authorizations for the paired 1392-1395 MHz and 1432-1435 MHz bands shall be for 3 megahertz of paired spectrum in accordance with §27.5(e) Authorization for Blocks A and B will be based on Economic Areas Groupings (EAGs), as specified in §27 6(e).

(g) *1670-1675 MHz band.* Initial authorizations for the 1670-1675 MHz band shall be for 5 megahertz of spectrum in accordance with §27.5(f) Authorizations will be on a nationwide basis

(h) *2385-2390 MHz band.* Initial authorizations for the 2385-2390 MHz band shall be for 5 megahertz of spectrum in accordance with §27.5(g) Authorizations will be on a nationwide basis.

Part 90 of title 47 of the Code of Federal Regulations, is amended to read as follows·

PART 90 – PRIVATE LAND MOBILE RADIO SERVICES

1 The authority citation for Part 90 continues to read as follows

AUTHORITY: Sections 4(i), 11, 303(g), 303(r), and 302(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), 332(c)(7).

2 Section 90 175 is corrected to remove a reference to itinerant operation in the 217-220 MHz band

§ 90.175 Frequency Coordinator Requirements.

* * * * *

(j) * * *

(13) Except for applications for the frequencies set forth in §§ 90 719(c) and 90.720, applications for frequencies in the 220-222 MHz band.

(14) Applications for a state license under § 90.529

(15) Applications for narrowband low power channels listed for itinerant use in § 90.531(b)(4).

3 Section 90.209 is amended to read as follows

§ 90.209 Bandwidth limitations.

* * * * *

(b) * * •

(5) * * *

STANDARD CHANNEL SPACING/BANDWIDTH

Frequency band (MHz)	Channel spacing (kHz)	Authorized bandwidth (kHz)
*****	*****	*****
216-220	6 25	[3]20/11.25/6
*****	*****	*****

* * *

[5] Licensees will be allowed to combine contiguous channels up to 50 kHz, and more than 50 kHz only upon a showing of adequate justification per §90 259(b)(10)

4 Sections 90.259(a)(7), (a)(8) and (b)(9) are adjusted to reflect the new channel plans for the 217-220 MHz and 1427-1432 MHz bands Section (b)(7) is changed to list the power limits in ERP, rather than EIRP Section (c)(3) is modified to clarify that airborne operations are permitted pursuant to §90 248(f)

§ 90.259 Assignment and use of frequencies in the bands 216-220 MHz and 1427-1432 MHz.

(a) * * *

(7) Frequencies will be assigned with a 6 25 kHz, 12 5 kHz, 25 kHz or 50 kHz channel bandwidth Frequencies may be assigned with a channel bandwidth exceeding 50 kHz only upon a showing of adequate justification.

(8) Assignable 6.25 kHz channels will occur in increments of 6.25 kHz from 217 00625 MHz to 219 99375 MHz. Assignable 12.5 kHz channels will occur in increments of 12.5 kHz from 217 0125 MHz to 219.9875 MHz Assignable 25 kHz channels will occur in increments of 25 kHz from 217.025 MHz to 219 975 MHz Assignable 50 kHz channels will occur in increments of 50 kHz from 217.025 MHz to 219.975 MHz

* * * * *

(b) * * * * *

* * *

(7) For primary operations base, mobile, operational fixed and temporary fixed operations are permitted

(i) At the locations specified in (b)(4) of this section, primary operations are performed in the 1427-1429 MHz and 1431 5-1432 MHz bands. The maximum ERP limitations are as follows

Operation	Frequency range (MHz)			
	1427-1428	1428-1428.5	1428 5-1429	1431.5-1432
Fixed	61 1 watts	6 11 watts	0 611 watt	0.611 watt
Mobile	0 611 watt	0 611 watt	0 015 watts	0.015 watts
Temporary fixed	0 611 watt	0 611 watt	0 611 watt	0 611 watt

(ii) For all other locations, primary operations are performed in the 1429.5-1432 MHz band. The maximum ERP limitations are as follows:

Operation	Frequency range (MHz)			
	1429.5-1430	1430-1430.5	1430.5-1431.5	1431.5-1432
Fixed	0.611 watt	0.611 watt	6.11 watts	61.1 watts
Mobile	0.015 watts	0.611 watt	0.611 watt	0.611 watt
Temporary fixed	0.611 watt	0.611 watt	0.611 watt	0.611 watt

* * *

(9) Assignable frequencies occur in increments of 12.5 kHz from 1427.00625 MHz to 1431.99375 MHz.

* * *

(c) * * *

(3) Except for the transmissions that are permitted under § 90.248(f) of this chapter, airborne use is prohibited.

* * * * *

Part 95 of title 47 of the Code of Federal Regulations, is amended to read as follows.

PART 95 – PERSONAL RADIO SERVICES

a The authority citation for Part 95 continues to read as follows:

AUTHORITY: Sections 4, 303, 48 Stat. 1066, 1082 as amended; 47 U.S.C. 154, 303.

b Section 95.630 is amended to correct the reference to the 1427-1432 MHz band as follows:

§ 95.630 WMTS Transmitter frequencies.

WMTS transmitters may operate in the frequency bands specified as follows:

608-614 MHz

1395-1400 MHz

1427-1429.5 MHz except at the locations listed in § 90.259(b)(4) where WMTS may operate in the 1429-1431.5 MHz band.